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Music’s Effect On The Brain

A persons first thoughts on ways that music can have an effect on their brain; a person listens to music but does not think that the music that they listen to can effect their brain. Most people do not think that it is possible to change their whole day by the music that they play on the radio, I-pod, cd etc.. Music has such an impact on a person that it could even alter the way that they may think and react to something that will occur during their day. It is hard to grasp the concept that even the volume of the music you listen to can change the way you may think. How does a persons brain interpret a musical note? Most people do not pay any attention to the damages or in general effects on how music can be used as a resource or a drug. It is always wise to use it with caution no matter how much you may love it. It can still be very dangerous and even possibly cause one to lose their hearing.

Music creates activity in the brain, in which sets rise to the substance of the mind. It creates thought. It also creates emotion. The way that the brain interprets music is complicated. What one thinks gets them to their feet. In fact the sound of music (pitch) does not move you at that jazz concert you attend. The Rhythm makes one think, "wow, I like that". How many times can a person say that they remember the pitch the artist played at the concert, but how many times can they say that they remember even the smallest piece of the rhythm? It is because the brain can remember motion. The rhythm has an effect of motion on the brain. It relates to how the brain interprets a musical note. The ear drum moves in and out to whatever the frequency of the note struck is. Thus, rhythm is like movement to the brain and is easier to remember and makes that lasting effect. It is almost as if a person were to look at a piece of art work and can remember all of the colors used, but cannot remember the exact form the colors had once made. It is possible though that one may remember what the piece of art was of. This though is not remembering how it was. All based on how the brain processes day to day activities. A person cannot possibly remember all of the little things that happened during the day, but the major things that occurred are remembered. They made you think greatly. Pitch is wonderful as all the little things, but just as the little things it is harder to remember.

How does my brain interpret musical notes? The word pitch refers to the mental representation one has on fundamental frequency of a sound. The frequency being the vibrating air molecules caused by the striking of a note. When a person takes these air molecules in it makes their ear drum rapidly move in and out many times per second. For example, every time that middle C is played on the piano, your ear drum moves rapidly in and out 261.63 times per second. Neurons in the brains auditory cortex interprets signals and sends them to the rest of the nervous system. A small portion of auditory neurons react strongly when exposed to sound. Meaning vibrating air molecules make your eardrum move rapidly which does not lead to the pitch of the note played, but that the brain maps the vibrating air molecules which then turns into the sound waves which leads to the pitch heard. It is amazing to think that in a persons ear sound is processing and doing it so quickly at that. Pitch is easily forgotten, yet still is something that people take for granted. It is a very complicated process and without it there would not be something called sound.

Does music have any life changing effects on me? A persons memory can be triggered by music. It all has to do with tone recognition. It involves complicated neural computations interacting with ones own memory. A human brain ignores many things while we focus on different factors in our lives. The brains computational system is able to separate aspects of a song that remains the same each time we hear it from the parts that change and do not remain the same throughout the rest of the song. If the brain did not do this, each time we listened to a song at a different volume we would experience it as a totally different song. Volume is not the only aspect that can change our perception of a song. Instruments and tempo change our perception of a song also. In the process of taking certain features from a song increases the complication of the neural system necessary for processing music. Separating the invariable properties from the momentary ones. Creating the brain to remember parts of our lives that we had thought had been long forgotten. It was all done in the brain while separation and remembering parts of a song. The brain has a complicated system that makes us function towards music in different ways.

How could something listened to alter ones actions through out the day? It all starts with music and emotions. Everything goes right back to movement and rhythm. Movement causes more than just a reaction to a piece of music. In a study done at the University of New Haven, proves that stability of a person can change through the music the person listens to. Rock consisting of Heavy Metal, Punk, Gothic/Wave, and regular Rock music. Urban consisting of Hip Hop/Rap and R&B/Soul. Pop/Dance consisting of Trance/Techno and Top 40/Charts. The graph shows that people are more stable listening to Pop than Rock, and less stable listening to Urban music, like Rap, which is the worst music you can listen to because it is harder for the brain to process. Though Pop is better than Rock, and Rock is better than Urban music(Rap), Elite music consisting of Classical, Jazz, and Gospel is the best for your stability. Elite received a flat rate total of 6.50. Studies show that out of the twelve trials done that Pop is better than Urban and Rock, but Elite is the better to listen to than the rest. Pop/Dance received a 6.85 total stability rating, which is greater than Rock, which received a 6.86, and Urban which received a 7.35 stability rating. Many would think that Rock would be the worse for a person to listen to because it is made out of loud drums and guitar. It all has to do with the way that the brain processes these genres of music. A person will be more stable throughout their day after listening to elite music than the rest. They will make more thought out decisions through out their day. In my own experiment elite music was listened to while getting ready for the day ahead each day for a week. Through out the week decisions made were more patient and thought out. Temper did not rise quickly and tolerance began to build. It was not like everything had changed but it began to make a lasting effect. By taking out other genres of music such as Rock and Urban for one week and only listening to elite music had a noticeable effect. To think that one can get better and one could be more focused and patient seems impossible. It is not impossible. This process is not for everyone. This all leads back to the movement of the genre one listens to. Without movement music would not be music. Movement is what we remember without our brains processing the pitches songs would not be songs, and with out the humans complex brain, we would not be able to hear thins in general like music the way that we do. terms of volume can change all of this.

Does the level of volume have any effect on ones brain? Listening to music loudly is never good for your brain, let alone your ears. By listening to music to loud a person can become deaf over the years. Listening to music at any volume is not good for your ears, listening to it loudly definitely does not help. In time it adds up and ones eardrum becomes weaker and cannot function as they used to. Listening to music loudly holds the equivalent of hearing a chainsaw or other machinery. Hearing a ringing in ones ear is common because ones ear cannot process the sound that well, and by forcing it to do so one can destroy their own hearing. People like to drown out noise around them or an occurrence in their life, but at the same time their hearing is fading away. Doing this is just adding more noise to the equation. Though one may not hear all the sounds around them, their ears are still trying to process all of it at once. Most people take their hearing for granted, not knowing that they are damaging their ears with their mp3 players and sound systems in their car and home. When putting a sound system in a car it is like putting ones ears in a noise death box. It is literally a box of waves traveling in and out of your ears damaging not only your ears but your brain at the same time. Almost like getting high when you listen to your music loud endorphin’s in your brain release and create a high. You damage brain cells and feel zoned out and dazed. When endorphin’s release in your brain it is almost like smoking weed. Ones pupils become dilated and you get a high sensation. Music is like feeding your brain. Volume controls how much you feed it. When putting yourself in situations like that you are feeding your brain to much. By doing so the way the brain then processes sound becomes less complex than before. It will begin to comprehend less but still taking in everything, but now this just damaging your hearing at a more substantial, greater level than before. Therefore listening to music loudly is bad for a person and can eventually make one turn deaf.

In conclusion, the brain is a powerful tool the body uses and needs to survive in a world of music and sound. It is something that one would not want to damage and always should want to keep at its best.

Whether one is listening to Elite, Urban, Rock or Pop music one should do it in a more responsible reasonable matter that will not effect the brain in a negative way. It was hard to think that the brain was doing this much to process sounds and music. Would this make someone change the way that they think about their brain and their ears negative effect with the genre and volume of music one listens to? In conclusion, this gives an unnoticed complexity to sound and life that most never knew before. Music does have a great impact on how your emotions will change, treat it responsibly.

Music and The Brain. Laurence O'Donnell, 1999. Music and The Brain. 1999. 1999 <http://www.cerebromente.org.br/n15/mente/musica.html>.

This website helped me understand how music effects ones body. It taught me how music relates to memory. It was a useful source, I did however get more from my book "Music and The Brain" than I received from this site.

This Is Your Brain On Music. Daniel J. Levitin, 2006.

This was my main source. I learned the most from this book and it was the biggest factor in helping me write this paper. This book taught me not frequencies, and all the fundamental things I needed to know on how pitch, rhythm, and tempo effected the brain. It taught me how it could change ones emotions. Thus is was a great help. I would recommend this book to anyone who enjoys music and would like to know some fun details on what it can do to your brain.

Music To My Brain. 1994-2009. Music To My Brain. 1994-2009. 1994-2009 <http://serendip.brynmawr.edu/exchange/node/3914>.